Label	Exp	S	TTL

FIG.1

SHIM	Data Link Info	Label	IP PDU
ATM/FR	VPI/VCI DLCI		IP PDU

FIG.2

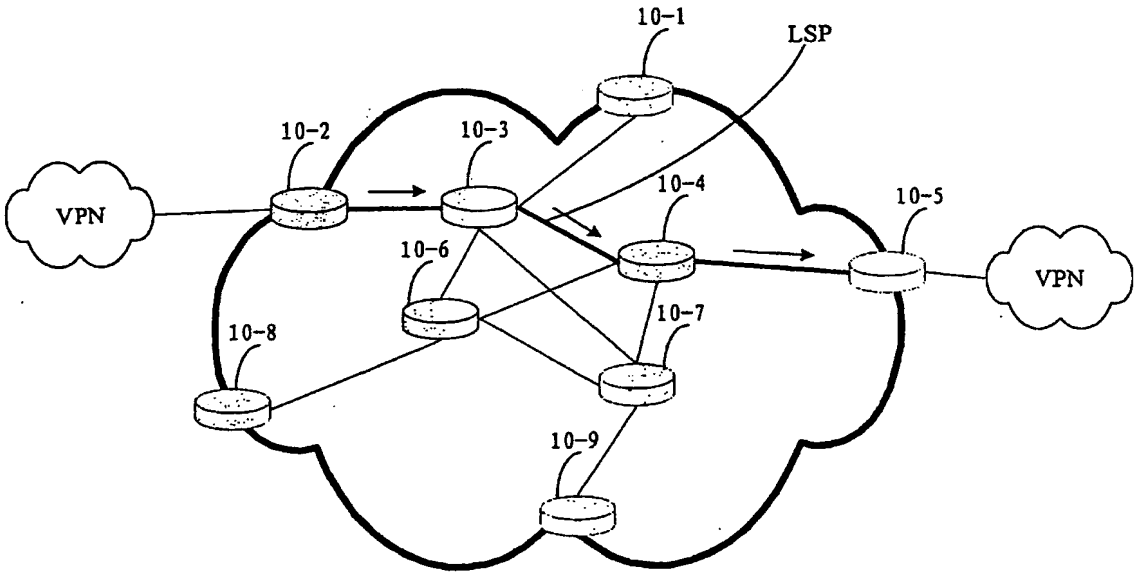


FIG.3

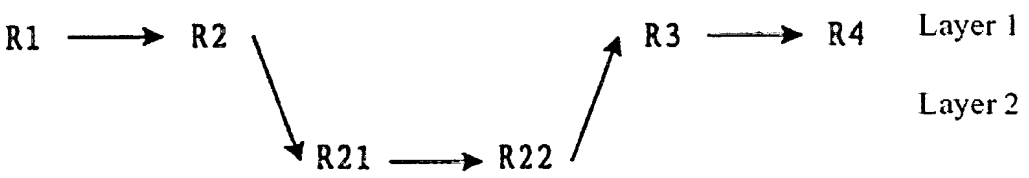


FIG.4

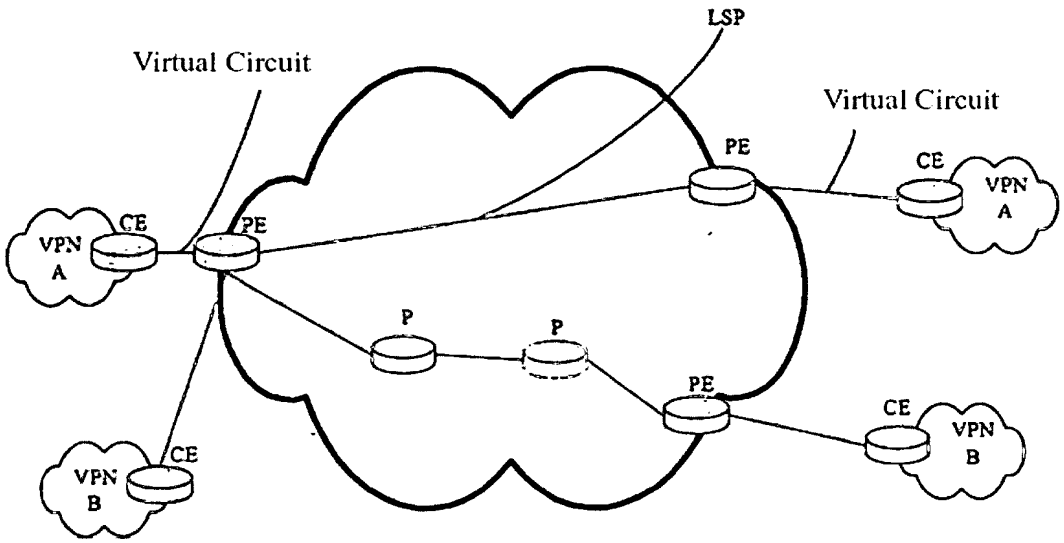
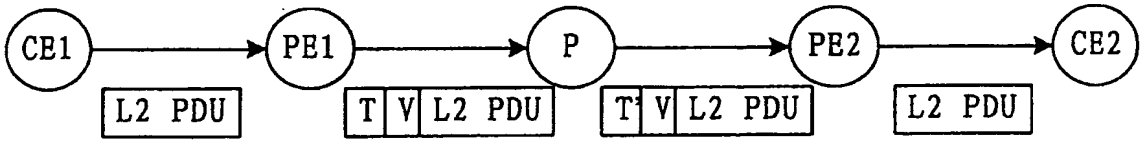


FIG.5



L2 PDU: data link layer message

T: tunnel label

V: VC label

T': the outer layer label will be replaced during the forwarding process

FIG.6

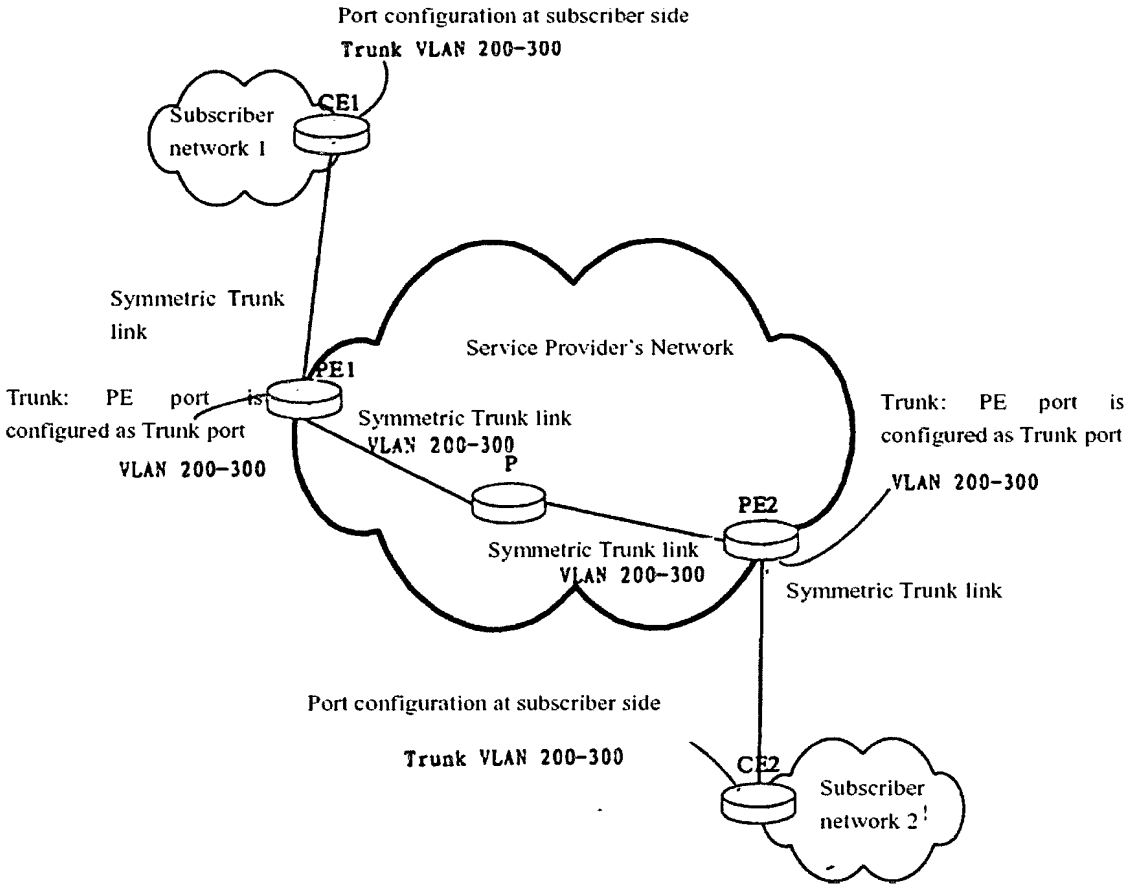

Port configuration at subscriber side
Trunk VLAN 200-300
Subscriber network 1
CE1
Symmetric Trunk link
Service Provider's Network
PE1
Trunk: PE port is configured as Trunk port
VLAN 200-300
Symmetric Trunk link
VLAN 200-300
P
PE2
Trunk: PE port is configured as Trunk port
VLAN 200-300
Symmetric Trunk link
VLAN 200-300
Symmetric Trunk link
Port configuration at subscriber side
Trunk VLAN 200-300
CE2
Subscriber network 2

FIG.7

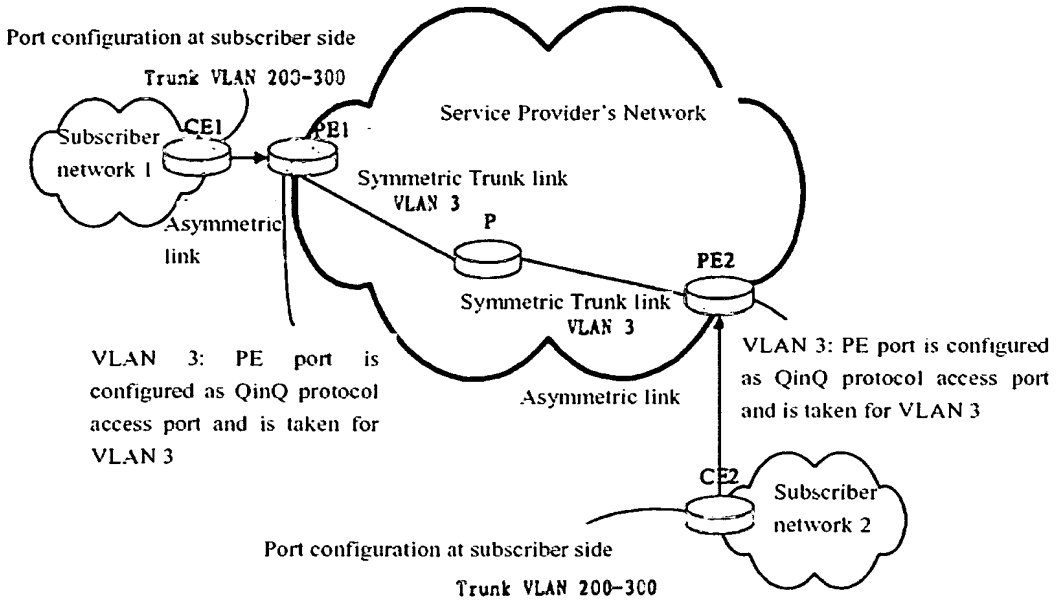


FIG.8

DA (6B)	SA (6B)	ETYPE (8100) (2B)	Subscriber VLAN tag (2B)	ETYPE (2B)	DATA (0-1500byte)	FCS (4B)

FIG.9

DA (6B)	SA (6B)	ETYPE (8100) (2B)	Tag of VLAN 3	ETYPE (8100) (2B)	Subscriber VLAN tag (2B)	ETYPE (2B)	DATA (0-1500byte)	FCS (4B)

FIG.10

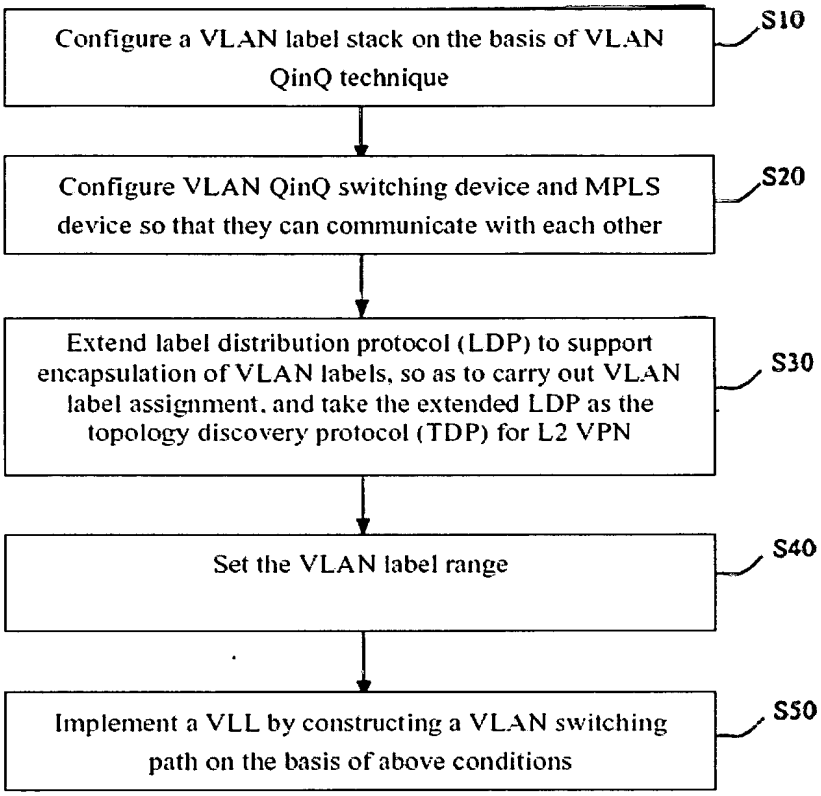

Configure a VLAN label stack on the basis of VLAN QinQ technique
S10
Configure VLAN QinQ switching device and MPLS device so that they can communicate with each other
S20
Extend label distribution protocol (LDP) to support encapsulation of VLAN labels, so as to carry out VLAN label assignment, and take the extended LDP as the topology discovery protocol (TDP) for L2 VPN
S30
Set the VLAN label range
S40
Implement a VLL by constructing a VLAN switching path on the basis of above conditions
S50

FIG.11